Masterhitch Europe Ltd

Hooker Hitch Installation and User Manual

“THE SAFEST HITCH IN THE WORLD”

This manual must be kept at all times within the cab of the machine to which the Hooker Hitch is fitted and available to all personnel who require this manual.

Introduction

Masterhitch Europe Ltd would like to thank you for purchasing the Masterhitch Hooker Hitch. The Hooker Hitch is a dedicated coupler and provides a quick and efficient changeover of buckets and attachments, while maintaining original machine geometry with no loss of digging force. Please read this manual and any other enclosed documentation before operating. This manual should be made available to all persons who may use or maintain the Hooker Hitch.

- **INTRODUCTION** **Page 1**
- **SAFETY NOTES** **Page 2**
- **STICKERS AND LABELS** **Page 3**
- **PRINCIPLES OF OPERATION** **Page 4**
- **BUCKET OR ATTACHMENT PICKUP** **Page 7**
- **BUCKET OR ATTACHMENT RELEASE** **Page 8**
- **THE USE OF THE LIFTING EYE** **Page 8**
- **SUITABILITY OF ATTACHMENTS** **Page 9**
- **MAINTENANCE** **Page 9**
- **PROHIBITED OPERATIONS** **Page 9**
- **SPARE PARTS LIST** **Page 10**
- **WARRANTY** **Page 10**
- **STORAGE AND DISPOSAL** **Page 11**
- **CONTACT** **Page 11**

Safety notices

All personnel working with the equipment must read the Masterhitch and base machine operation manuals and fully understand the function of the Masterhitch before operating it and/or any of its attachments. Particular attention should be paid to the personal safety while installing, using or maintaining the Hooker Hitch and all relevant work site safety procedures are to be followed.

It is important that the operator reads this and the base machine operation manuals and fully understands the operation of the Hooker Hitch before operating it and/or any of its attachments. The operator must also follow 'work site safety' procedures.

Lifting should be done using the appropriate lifting eye on the machine. Any bucket or attachment is to be removed prior to lifting. It is recommended that Hooker Hitch remains permanently fitted to the machine and therefore should be inspected/tested with the machine annually.

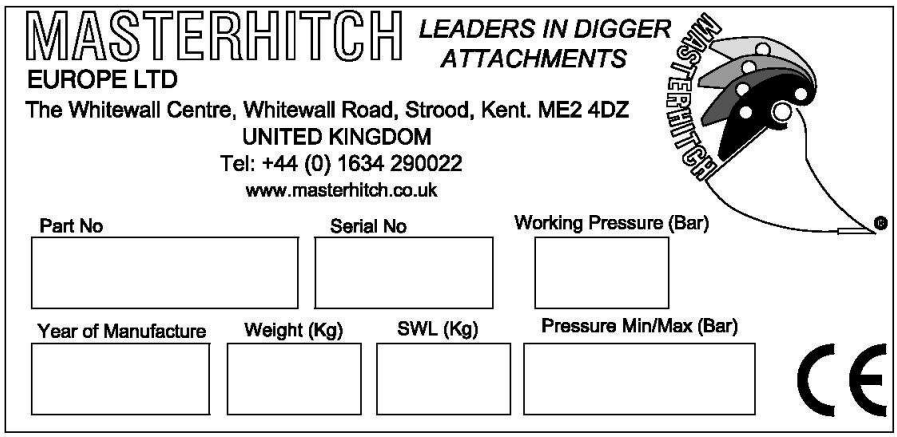
Personnel should not enter the working area of the machine while it is being operated. Repair work should only be carried out by Masterhitch Europe Ltd or an engineer appropriately qualified on the Hitch

Stickers and Labels

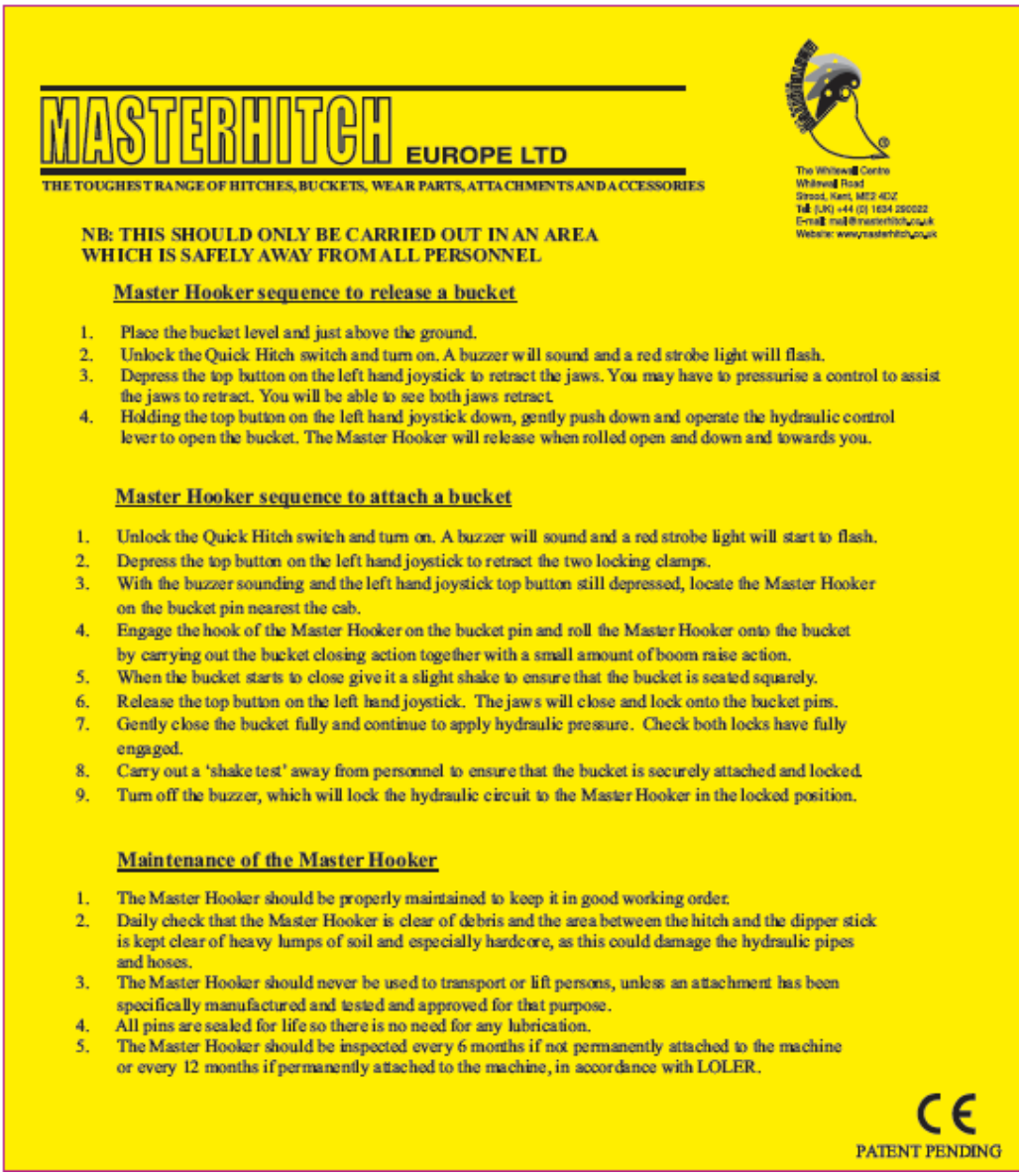
Each Masterhitch Hooker Hitch is fitted with an identification plate.

This identification plate gives the following information:

- **The part number (which indicates the machine type for which the Masterhitch is designed to fit).**
- **The Masterhitch serial number.**
- **The year of manufacture.**
- **The Nett Weight of the Masterhitch**
- **The Safe Working Load for the Masterhitch.**
- **The working pressure.**
- **Manufactures name and address**



Serial plate.



MASTERHITCH EUROPE LTD

THE TOUGHEST RANGE OF HITCHES, BUCKETS, WEAR PARTS, ATTACHMENTS AND ACCESSORIES

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Website: www.masterhitch.co.uk

NB: THIS SHOULD ONLY BE CARRIED OUT IN AN AREA WHICH IS SAFELY AWAY FROM ALL PERSONNEL

Master Hooker sequence to release a bucket

1. Place the bucket level and just above the ground.
2. Unlock the Quick Hitch switch and turn on. A buzzer will sound and a red strobe light will flash.
3. Depress the top button on the left hand joystick to retract the jaws. You may have to pressurise a control to assist the jaws to retract. You will be able to see both jaws retract.
4. Holding the top button on the left hand joystick down, gently push down and operate the hydraulic control lever to open the bucket. The Master Hooker will release when rolled open and down and towards you.

Master Hooker sequence to attach a bucket

1. Unlock the Quick Hitch switch and turn on. A buzzer will sound and a red strobe light will start to flash.
2. Depress the top button on the left hand joystick to retract the two locking clamps.
3. With the buzzer sounding and the left hand joystick top button still depressed, locate the Master Hooker on the bucket pin nearest the cab.
4. Engage the hook of the Master Hooker on the bucket pin and roll the Master Hooker onto the bucket by carrying out the bucket closing action together with a small amount of boom raise action.
5. When the bucket starts to close give it a slight shake to ensure that the bucket is seated squarely.
6. Release the top button on the left hand joystick. The jaws will close and lock onto the bucket pins.
7. Gently close the bucket fully and continue to apply hydraulic pressure. Check both locks have fully engaged.
8. Carry out a 'shake test' away from personnel to ensure that the bucket is securely attached and locked.
9. Turn off the buzzer, which will lock the hydraulic circuit to the Master Hooker in the locked position.

Maintenance of the Master Hooker

1. The Master Hooker should be properly maintained to keep it in good working order.
2. Daily check that the Master Hooker is clear of debris and the area between the hitch and the dipper stick is kept clear of heavy lumps of soil and especially hardcore, as this could damage the hydraulic pipes and hoses.
3. The Master Hooker should never be used to transport or lift persons, unless an attachment has been specifically manufactured and tested and approved for that purpose.
4. All pins are sealed for life so there is no need for any lubrication.
5. The Master Hooker should be inspected every 6 months if not permanently attached to the machine or every 12 months if permanently attached to the machine, in accordance with LOLER.

CE

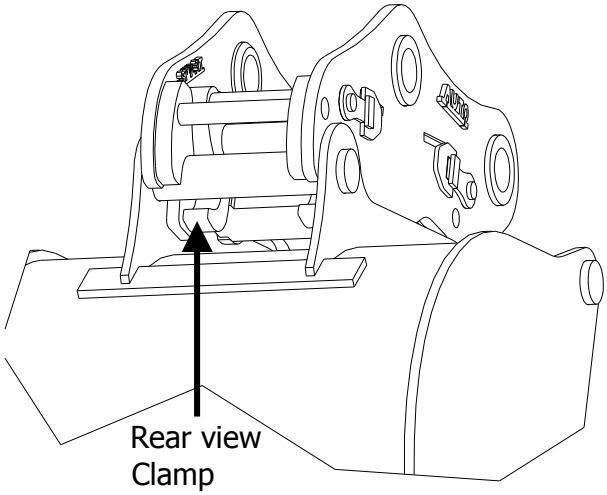
PATENT PENDING

Operators and Maintenance label in cab.

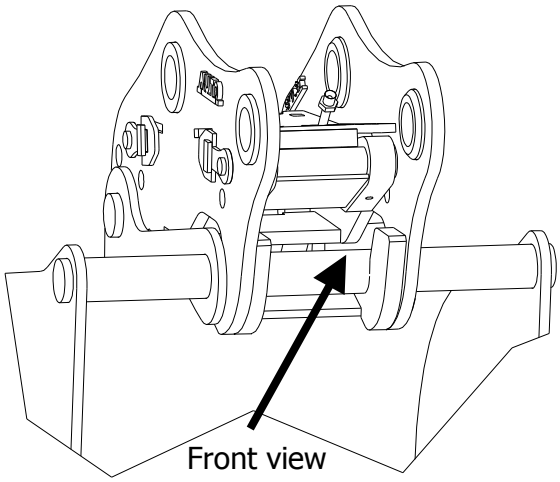
Principles of Operation and Safety

These are the operating, maintenance and safety instructions for the safe use of the Masterhitch Hooker Hitch system. All machine operators should be correctly trained in the safe use of the machine including the safe and correct use of the Masterhitch. If you are unsure or have any questions please contact Masterhitch Europe Ltd before commencing any work.

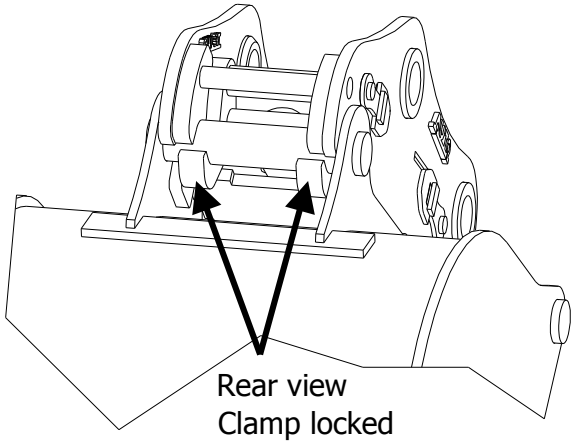
The Masterhitch Hooker Hitch is a dedicated Quick Coupler and can only be used with dedicated Masterhitch Buckets and Attachments. The Masterhitch uses the bucket pins to locate on, see fig 1a and 1b, and two clamps to lock onto the bucket or attachment. See fig 2a and 2b. The Masterhitch Hooker Hitch has been designed with safety as top priority making it in our opinion the safest quick coupler on the market. The way the Hooker attaches to the bucket or attachment makes it impossible for the bucket or attachment to be dropped off even in the unlocked position, as the bucket has to be placed on the ground before you can disengage the hook from the bucket. Once the Hooker is locked on to the bucket the hydraulic circuit remains in a constantly pressurised state, therefore it is impossible to unlock itself. In the event of hydraulic failure the strong spring inside the ram ensures the locks remain in the locked position, and the only way to remove the bucket or attachment is with the hydraulic pressure.



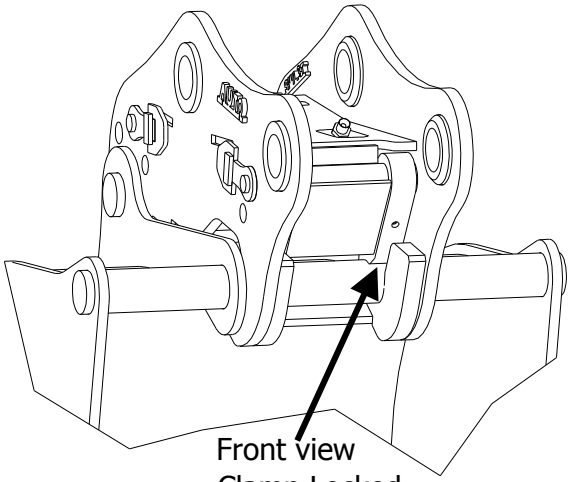
Rear view
Clamp
Released
Fig 1a



Front view
Clamp
Released
Fig 1b



Rear view
Clamp locked
Fig 2a



Front view
Clamp Locked
Fig 2b

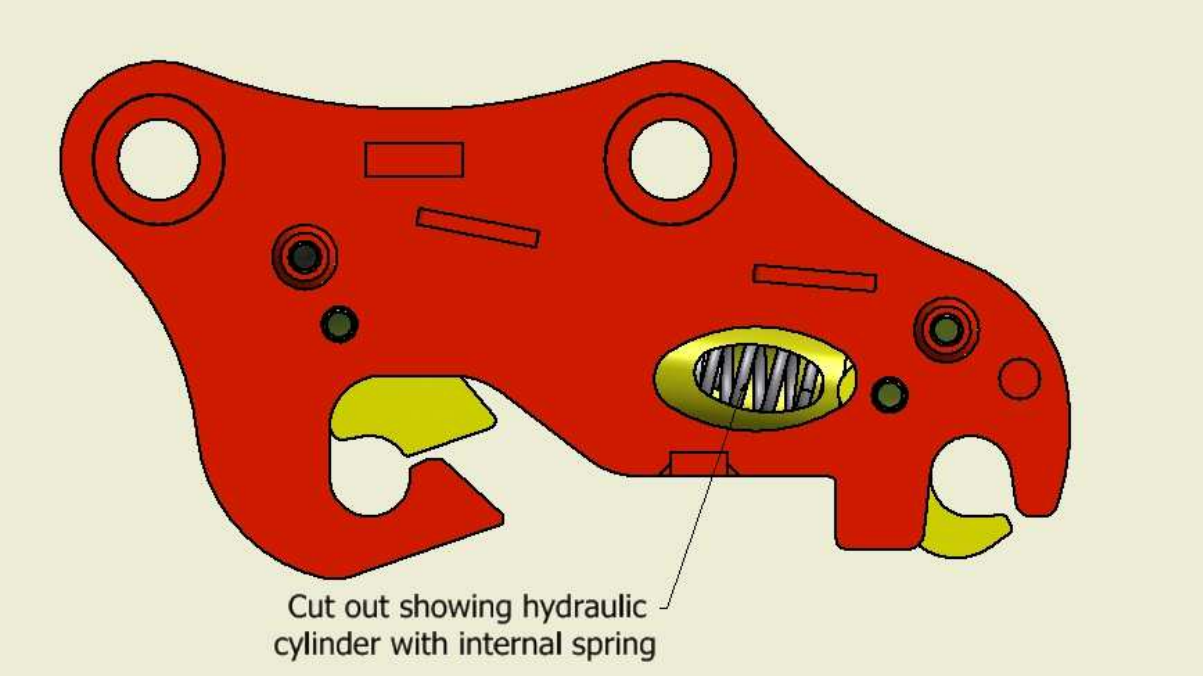


Fig 3.

Masterhitch Hydraulic Ram

The Masterhitch Hooker Hitch uses a hydraulic ram inside the quick hitch to operate the lock clamps. See fig 3. The Hooker Hitch has a strong spring inside the ram which stops the jaws creeping. See fig 3.
The principle of operation is that the Hydraulic ram is always under constant pressure while the engine of the machine is running and the switch in the cab is locked in the off position. This alone should ensure that the Masterhitch always remains locked onto the bucket or attachment. However the spring inside the ram ensures there is no danger of the clamps creeping back and releasing the bucket or attachment.

Spring forces are as follows:
MH08- 300 kgs force
MH15- 375kgs force
MH22- 375 kgs force
MH35- 715 kgs force
MH45- 715 kgs force

WARNING: THIS OPERATION SHOULD ONLY BE CARRIED OUT IN AN AREA, WHICH IS SAFELY AWAY FROM ALL PERSONNEL.

Sequence to attach a bucket

1. **Unlock the Quick Hitch switch and turn on, see fig 4. A buzzer will sound and a red strobe light will start to flash.**
2. **Depress the top button on the left hand joystick to retract the two locking clamps.**
3. **With the buzzer sounding and the left hand joystick top button still depressed, locate the Hooker Hitch on the bucket pin nearest the cab.**
4. **Engage the hook of the Hooker Hitch on the bucket pin and roll the Hooker Hitch onto the bucket by carrying out the bucket closing action together with a small amount of boom raise action.**
5. **When the bucket starts to close give it a slight shake to ensure that the bucket is seated squarely.**
6. **Release the top button on the left hand joystick fig 5. The jaws will close and lock onto the bucket pins.**
7. **Gently close the bucket fully and continue to apply hydraulic pressure. Check both locks have fully engaged.**
8. **Carry out a 'shake test' away from personnel to ensure that the bucket is securely attached and locked, fig 6.**
9. **Turn off the buzzer, which will lock the hydraulic circuit to the Hooker Hitch in the locked position.**

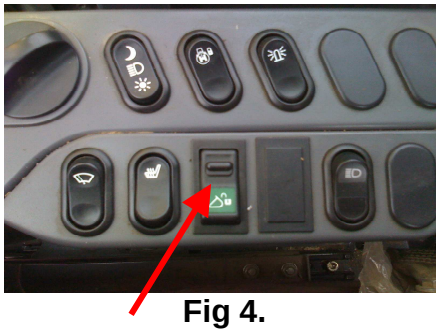


Fig 4.
Masterhitch unlock buzzer switch.

Fig 5.
Button to retract pins.

Rear Jaw in locked position

Rear Jaw in unlocked position

WARNING: THIS OPERATION SHOULD ONLY BE CARRIED OUT IN AN AREA, WHICH IS SAFELY AWAY FROM ALL PERSONNEL.

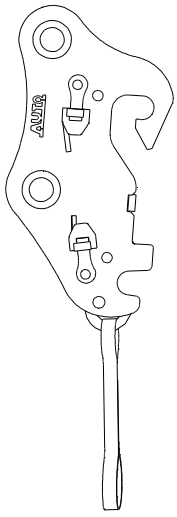
Sequence to release a bucket

1. **Place the bucket level and just above the ground.**
2. **Unlock the Quick Hitch switch and turn on. A buzzer will sound and a red strobe light will flash.**
3. **Depress the top button on the left hand joystick to retract the jaws. You may have to pressurize a control to assist the jaws to retract. You will be able to see both jaws retract.**
4. **Holding the top button on the left hand joystick down, gently push down and operate the hydraulic control lever to open the bucket. The Hooker Hitch will release when rolled open and down and towards you.**

The use of the lifting bar

All Master Hooker Hitches are fitted with tested and certified lifting bars and eyes.

- **Always place the Masterhitch flat and on the Floor with the excavator engine turned off when fitting or removing chains and strops.**
- **Always fit the correct sized shackle for the attachment of the chain or sling**
- **The lifting bar on the Master Hooker is intended for straight lifts only.Do not use the lifting bar for pulling at an angle.**
- **Always refer to the Machine Manufacturer's specifications for the SWL at various radii for the machine. Do not exceed these ratings.**
- **Remember that the heaviest load that can be lifted is the LOWEST SWL of the machine, the shackle, the Masterhitch lifting bar and the chains/slings.**
- **Never use any other part of the Masterhitch for lifting.**
- **Never use any other part of the Masterhitch for pushing or prying.**
- **Only tested and certified chains and slings should be used for lifting.**
- **Never swing suspended loads over heads of personnel.**
- **The test certificate supplied with the Masterhitch is valid for 12 months, and requires retesting when the 12 month period has expired and every 12 months after that.**



Attachments used with the Masterhitch Hooker

The Masterhitch can be used safely with many attachments that have been designed for use with it.
Attachments which can safely be used include:

- **Buckets – Trenching, Ditching, Grading, Rock and Riddle etc.**
- **Clamshell buckets and Grapples.**
- **Rippers and rakes.**
- **Compactors.**
- **Breakers and Augers.**
- **Handlers and Kerb lifters.**
- **Selecta Grabs and Shears**
- **Reversible Forks**
- **All bucket sizes are fully reversible, however in the reversed position they may hit the cab, boom or boom ram(s).**

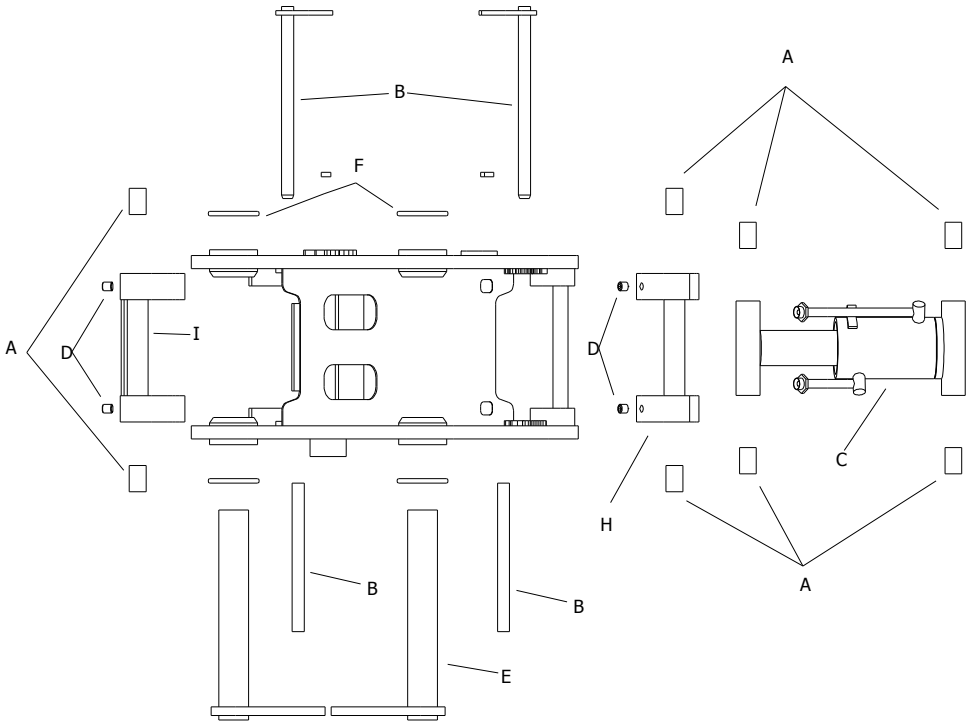
Maintenance of the Masterhitch Hooker

- **The Hooker Hitch should be properly maintained to keep it in good working order.**
- **Daily check that the Hooker Hitch is clear of debris and the area between the hitch and the dipper is kept clear of heavy lumps of soil, and especially hardcore as these could damage the hydraulic pipes and hoses.**
- **The Hooker Hitch should never be used to transport or lift persons, unless an attachment has been specifically manufactured and tested and approved for that purpose.**
- **All pins are sealed for life so there is no need for lubrication.**
- **The Hooker Hitch should be inspected every 6 months if not permanently attached to the machine or every 12 months if permanently attached to the machine, in accordance with LOLER.**

Prohibited operations

- **DO NOT** use the Masterhitch to strike material or hammer poles or post etc, as this could cause damaged to the Masterhitch and function could become impaired which could result in serious injury or even death.
- The Masterhitch **MUST NEVER** be used to transport or lift persons, unless an attachment has been specifically manufactured and tested and approved for that purpose.

Spare parts list



		M-08 HOOKER	M-15 HOOKER	M-22 HOOKER	M-35 HOOKER	M-45 HOOKER
A	Oil lite bushes	M-202830	M-303840	M-303840		
B	Ramsec Pins	M-0814	M-1514	M-2214	M-3514	
C	Ram	M-0818	M-1518	M-1518		
D	Grub Screws	M10 x 20				
E	Bucket Pin	MK0801				
F	O Rings	MK0803	MK1503	MK2203	MK3503	MK4503
G	Jaw pivot pin	M-0802	M-1502	M-2202	M-3502	M-4502
H	Front Jaw	M-0804	M-1504	M-2204	M-3504	M-4504
I	Rear Jaw	M-0805	M-1505	M-2205	M-3505	M-4505

Warranty

All parts of the Masterhitch Hitch are covered by a 12-month parts returned warranty unless the Masterhitch is used on a breaker then the warranty is reduced to 6 months.

Storage and disposal

Storage

If the Masterhitch Hooker is to be stored for any prolonged period of time the following procedure should be followed;

- **Remove the Masterhitch Hooker from the machine**
- **Fit blanking caps to the open hydraulic ports.**
- **Remove oil, grease and debris from the Masterhitch Hooker by power washing if necessary.**
- **Apply a smear of grease to exposed and unprotected metal surfaces e.g. bosses and Ram Rod.**
- **The Masterhitch Hooker should be placed in a secure dry location where it cannot fall or be knocked over.**

Disposal

If the Masterhitch Hooker is to be disposed of, the following procedure should be carried out;
Drain all hydraulic oil from the hydraulic cylinder into suitable containers.

- **Remove any oil, grease and debris from the Masterhitch Hooker.**
- **The Hooker can then be recycled via a scrap metal merchant.**

For further information please contact:

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